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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/814,227

04/01/2004

Akihiro Takahashi

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EXAMINER

ROBERTS, JESSICA M

ART UNIT

PAPER NUMBER

2621

NOTIFICATION DATE

DELIVERY MODE

08/01/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/814,227	Applicant(s) TAKAHASHI, AKIHIRO	
	Examiner JESSICA ROBERTS	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07/15/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/15/2008 has been entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1- 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higuchi et al., US 2001/0022612 in view of Nakashima et al., US-2001/0015754 and further in view of

4. Regarding claim 1, Higuchi discloses An electronic endoscope system having an electronic endoscope (**10**) and a processor (**20**) that processes an output of the electronic endoscope, the electronic endoscope including: an image capturing element (CCD, **13**) adapted to capture an image of an object to be observed; a signal processing circuit (correlated double sampling unit in conjunction with the analog digital converter and the digital video processor [0021] and **18-19**) that receives the output of the image capturing element; a digitized information outputting system (**10**) that outputs digitized information representing at least information intrinsic to the electronic endoscope and control information for the processor (information is communicated between the microcomputer **21** at the side of the endoscope and the microcomputer **35** for the processor [0025] and **21, 35**). Higuchi is silent in regards to a generates a digital video signal including a region included in a horizontal blanking interval; and a digitized information superimposing system that superimposes the digitized information output by the digitized information outputting system on the digital video signal output by the signal processing circuit in the region included in the horizontal blanking interval.

5. However, Nakashima discloses to generate a digital video signal including a region included in a horizontal blanking interval (Nakashima discloses the video signal is a TV signal, and the signal adder adds the control signal to a blanking interval of said TV signal so that said blanking interval includes the control signal, [0010]. Further disclosed in fig. 3, the character pattern is generated for each horizontal scanning line, so that a line of figures/letters is formed by 7 horizontal scanning lines. The image masking signal and the information signal, generated by the character generator 64 are

output in accordance with the synchronization signal from the timing generator 41 and are added to the video signal by the adder 61 and supplied to the modulator/transmitter 50 [0057]. Since a horizontal blanking interval is the time which during which the electron beam is turned almost off (as if to draw black) and moved from right to left to get ready to draw the next scan line on the picture tube, and Nakashima discloses that a line of figures/letters is formed by horizontal scanning lines, it is obvious that Nakashima also includes the horizontal blanking intervals as well); and a digitized information superimposing system that superimposes the digitized information output by the digitized information outputting system on the digital video signal output by the signal processing circuit in the region included in the horizontal blanking interval [0010], [0022]. Since a horizontal blanking interval is the time which during which the electron beam is turned almost off (as if to draw black) and moved from right to left to get ready to draw the next scan line on the picture tube, and Nakashima discloses that a line of figures/letters is formed by horizontal scanning lines, it is obvious that Nakashima also includes the horizontal blanking intervals as well).

6. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Higuchi and Nakashima in order to provide a small and light endoscope apparatus in which information (video settings) of an image pickup device of the endoscope is indicated and confirmed in a TV monitor [0006].

7. Regarding **claim 2**, the combination of Higuchi and Nakashima teaches everything as claimed above, see claim 1. In addition, Higuchi discloses The electronic

endoscope system according to claim 1, wherein the electronic endoscope is provided with a storage, which stores the information intrinsic to the electronic endoscope, the digitized information outputting system retrieving the information intrinsic to the electronic endoscope from the storage (microcomputer for performing an integral control on each circuit , [0022] and **21**).

8. Regarding **claim 3**, the combination of Higuchi and Nakashima teaches everything as claimed above, see claim 1 . In addition, Higuchi discloses The electronic endoscope system according to claim 1, wherein the information intrinsic to the electronic endoscope includes a type of the electronic endoscope (EEPROM, [0022] and **22**).

9. Regarding **claim 4**, the combination of Higuchi and Nakashima teaches everything as claimed above, see claim 3. In addition, Higuchi discloses The electronic endoscope system according to claim 3, and wherein the processor processes the digital video signal extracted from the output of the electronic endoscope in accordance with the information intrinsic to the electronic endoscope ([0030]). Higuchi is silent in regards to wherein the electronic endoscope outputs the digital video signal including the superimposed digitized information in the region included in the horizontal blanking interval to the processor.

10. However, Nakashima discloses wherein the electronic endoscope outputs the digital video signal including the superimposed digitized information in the region included in the blanking interval to the processor ([0010] and [0022]. Further disclosed in fig. 3, the character pattern is generated for each horizontal scanning line, so that a

line of figures/letters is formed by 7 horizontal scanning lines. The image masking signal and the information signal, generated by the character generator 64 are output in accordance with the synchronization signal from the timing generator 41 and are added to the video signal by the adder 61 and supplied to the modulator/transmitter 50 [0057]. Since a horizontal blanking interval is the time which during which the electron beam is turned almost off (as if to draw black) and moved from right to left to get ready to draw the next scan line on the picture tube, and Nakashima discloses that a line of figures/letters is formed by horizontal scanning lines, it is obvious that Nakashima also includes the horizontal blanking intervals as well.

11. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Higuchi and Nakashima in order to provide a small and light endoscope apparatus in which information (video settings) of an image pickup device of the endoscope is indicated and confirmed in a TV monitor [0006].

12. Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higuchi et al., US 2001/0022612 in view of Nakashima et al., US-2001/0015754 and further in view of Wada et al., US-7, 053,926.

13. Regarding **claim 5**, the combination of Higuchi and Nakashima as a whole are silent in regards to The electronic endoscope system according to claim 1, wherein the electronic endoscope is provided with at least one operable member which can be operated by a user, and wherein the digitized information outputting system outputs the control information in response to an operation of the at least one operable member.

14. However, Wada discloses at least one operable member which can be operated by user (Wada; freeze switch, **11**), and wherein the digitized information outputting system outputs the control information in response to an operation of the at least one operable member (Wada; microcomputer, column 4 line 62-66 and **30**).

15. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Higuchi, Nakashima, and Wada in order to provide an electronic endoscope apparatus that can easily form an image at a desired magnification, can obtain a still image itself, positioned in optimum conditions, in a state where the still image is arbitrarily enlarged, and moreover, can record the still image, which is enlarged, in a recording device through easy operation (column 2 line 19-26).

16. Regarding **claim 6**, the combination of Higuchi, Nakashima and Wada teaches everything as claimed above, see claim 5. In addition, The electronic endoscope system according to claim 5, wherein the processor includes an extracting system that extracts the digitized information from the digital video signal (Higuchi, mirror circuit in conjunction with the contour enhancing circuit and color conversion circuit, **26-28** [0030]). Higuchi silent in regards to including the superimposed digitized information in the region included in the blanking interval.

17. However, Nakashima teaches including the superimposed digitized information in the region included in the horizontal blanking interval ([0010]. Since a horizontal blanking interval is the time which during which the electron beam is turned almost off (as if to draw black) and moved from right to left to get ready to draw the next scan line

on the picture tube, and Nakashima discloses that a line of figures/letters is formed by horizontal scanning lines, it is obvious that Nakashima also includes the horizontal blanking intervals as well);.

18. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Higuchi and Nakashima in order to provide a small and light endoscope apparatus in which information (video settings) of an image pickup device of the endoscope is indicated and confirmed in a TV monitor [0006].

19. Regarding **claim 7**, the combination of The electronic endoscope system according to claim 6, wherein the processor includes a controller that controls a device to which the digitized information as extracted is directed (Higuchi and Wada both disclose a processor in which they both contain a microprocessor for controlling the processor. Furthermore, it's notoriously known that a processor would include a controller).

20. Regarding **claim 8**, The combination of Higuchi, Nakashima, and Wada as a whole teaches everything as claimed above, see claim 7. The combination of Higuchi and Nakashima are silent in regards to The electronic endoscope system according to claim 7, wherein the processor is connected with a displaying device the controller controlling the displaying device in accordance with the control information represented by the digitized information.

21. However, Wada teaches The electronic endoscope system according to claim 7, wherein the processor is connected with a displaying device (Wada; monitor column 4

line 38 and **38**), the controller controlling the displaying device in accordance with the control information represented by the digitized information (Wada, microcontroller performs various kinds of control, column 4 line 59-61 and **30**).

22. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Higuchi, Nakashima, and Wada in order to provide an electronic endoscope apparatus that can easily form an image at a desired magnification, can obtain a still image itself, positioned in optimum conditions, in a state where the still image is arbitrarily enlarged, and moreover, can record the still image, which is enlarged, in a recording device through easy operation (column 2 line 19-26).

23. Regarding claim 9, the combination of Higuchi, Nakashima, and Wada as a whole teaches everything as claimed above, see claim 7. In addition, Higuchi and Nakashima are silent in regards to The electronic endoscope system according to claim 7, wherein the processor is connected with a printing device the controller controlling the printing device in accordance with the control information represented by the digitized information.

24. However, The electronic endoscope system according to claim 7, wherein the processor is connected with a printing device (Wada; recording device, column 4 line 36-39 and **17**), the controller controlling the printing device in accordance with the control information represented by the digitized information (Wada, microcontroller performs the transmission of the record trigger signal to recording device, column 5 line 25-29 and **36**).

25. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Higuchi, Nakashima, and Wada in order to provide an electronic endoscope apparatus that can easily form an image at a desired magnification, can obtain a still image itself, positioned in optimum conditions, in a state where the still image is arbitrarily enlarged, and moreover, can record the still image, which is enlarged, in a recording device through easy operation (column 2 line 19-26).

26. Regarding **claim 10**, The combination of Higuchi and Nakashima as a whole teaches everything as claimed above, see claim 1. In addition, Higuchi discloses The electronic endoscope system according to claim 1, wherein the digital video signal output by the signal processing system includes luminance signal and color difference signals ([0021]. Higuchi is silent in regards to multiplexing the signals in accordance with a time-division multiplexing method.

27. However, Adair teaches a time division multiplexing scheme ([0018]).

28. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Higuchi and Nakashima with the teachings of Adair to provide a surgical device with imaging capability which may be battery powered and may wirelessly communicate for viewing video images ([0012]).

29. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higuchi et al., US 2001/0022612 in view of Adair et al., US-2006/0022234A1.

30. Regarding **claim 11**, the combination of Higuchi, Nakashima and Adair as a whole teaches everything as claimed above, see claim 10. Higuchi teaches the DVP 20

generates a luminance signal (Y) and a color difference signal (C) in a digital process performed on an image signal (video signal) output from the CCD 13, and performs an image process such as amplification, white balance, gamma amendment, etc. ([0021]).

However, Higuchi is silent in regards to the digitized information superimposing system superimposes the digitized information in the region included in the blanking interval.

31. However, Nakashima discloses the video signal is a TV signal, and the signal adder adds the control signal to a horizontal blanking interval of said TV signal so that said blanking interval includes the control signal ([0010] and [0025]). Nakashima discloses to Further Nakashima discloses a signal adder for adding the information signal to the video signal to output the video signal added with the information signal to the transmitter ([0032] and fig. 2. In fig. 3, the character pattern is generated for each horizontal scanning line, so that a line of figures/letters is formed by 7 horizontal scanning lines. The image masking signal and the information signal, generated by the character generator 64 are output in accordance with the synchronization signal from the timing generator 41 and are added to the video signal by the adder 61 and supplied to the modulator/transmitter 50 [0057]. Since a horizontal blanking interval is the time which during which the electron beam is turned almost off (as if to draw black) and moved from right to left to get ready to draw the next scan line on the picture tube, and Nakashima discloses that a line of figures/letters is formed by horizontal scanning lines, it is obvious that Nakashima also includes the horizontal blanking intervals as well).

32. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Higuchi and Nakashima in order to

provide a small and light endoscope apparatus in which information (video settings) of an image pickup device of the endoscope is indicated and confirmed in a TV monitor [0006].

33. The combination of Higuchi and Nakashima as a whole are silent in regards to the digitized information are multiplexed in accordance with a time-division multiplexing method.

34. However, Adair teaches a time division multiplexing scheme ([0018]).

35. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Higuchi and Nakashima with the teachings of Adair to provide a surgical device with imaging capability which may be battery powered and may wirelessly communicate for viewing video images ([0012]).

36. Regarding **claim 12**, the combination of Higuchi, Nakashima and Adair as a whole fail to teach wherein the multiplexed luminance signal, color difference signals and the digitized information is a parallel digital video signal, and wherein the electronic endoscope further includes a converting system that converts The parallel digital video signal into a serial digital video signal. However, Official notice is taken that both the concept and the advantage of providing the limitations as claimed are notoriously well known and expected in the art, and therefore would have been obvious to incorporate in Higuchi, Nakashima, and Adair for the benefit of outputting the digital video signal to various peripheral devices for displaying, printing, or controlling purposes.

37. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakashima et al., US-2001/0015754 in view of Higuchi et al., US 2001/0022612.

38. Regarding **claim 13**, Nakashima teaches A method of controlling a processor of an electronic endoscope system that includes an electronic endoscope and the processor, comprising: the electronic endoscope generating a digital video signal including a region included in a horizontal blanking interval (Nakashima discloses the video signal is a TV signal, and the signal adder adds the control signal to a blanking interval of said TV signal so that said blanking interval includes the control signal, [0010]. Further disclosed in fig. 3, the character pattern is generated for each horizontal scanning line, so that a line of figures/letters is formed by 7 horizontal scanning lines. The image masking signal and the information signal, generated by the character generator 64 are output in accordance with the synchronization signal from the timing generator 41 and are added to the video signal by the adder 61 and supplied to the modulator/transmitter 50 [0057]. Since a horizontal blanking interval is the time which during which the electron beam is turned almost off (as if to draw black) and moved from right to left to get ready to draw the next scan line on the picture tube, and Nakashima discloses that a line of figures/letters is formed by horizontal scanning lines, it is obvious that Nakashima also includes the horizontal blanking intervals as well); the electronic endoscope superimposing control information in the region included in the horizontal blanking interval to control the processor on the digital video signal ([0025]); the electronic endoscope transmitting the superimposed digital video signal including the control information superimposed in the region included in the horizontal blanking interval ([0023], [0025] Nakashima discloses the video signal is a TV signal, and the signal adder adds the control signal to a blanking interval of said TV signal so that said

blanking interval includes the control signal, [0010]. Further disclosed in fig. 3, the character pattern is generated for each horizontal scanning line, so that a line of figures/letters is formed by 7 horizontal scanning lines. The image masking signal and the information signal, generated by the character generator 64 are output in accordance with the synchronization signal from the timing generator 41 and are added to the video signal by the adder 61 and supplied to the modulator/transmitter 50 [0057]. Since a horizontal blanking interval is the time which during which the electron beam is turned almost off (as if to draw black) and moved from right to left to get ready to draw the next scan line on the picture tube, and Nakashima discloses that a line of figures/letters is formed by horizontal scanning lines, it is obvious that Nakashima also includes the horizontal blanking intervals as well). Nakashima is silent in regards to the processor receiving the superimposed digital video signal and extracting the control information; and the processor operating in accordance with the control information .

39. However, Higuchi teaches extracting the control information ([0030]) and the processor operating in accordance with the control information (the microcomputer in conjunction with ROM, the microcomputer integrally controlling each circuit in the processor and the ROM stores the process information obtained by the processor device(0025] and **35, 26**).

40. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Nakashima and Higuchi for providing an electronic endoscope apparatus capable of reducing flicker on the screen when an image obtained by an endoscope is displayed on a display unit, etc. other than a TV

monitor, thereby improving the quality of the image by providing a greater resolution ([0009]).

Examiner's Note

1. The referenced citations made in the rejection(s) above are intended to exemplify areas in the prior art document(s) in which the examiner believed are the most relevant to the claimed subject matter. However, it is incumbent upon the applicant to analyze the prior art document(s) in its/their entirety since other areas of the document(s) may be relied upon at a later time to substantiate examiner's rationale of record. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). However, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004)..

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

3. Ames et al., US-4,782,386 Video endoscope with a light source operable in a continuous or stroboscopic mode.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA ROBERTS whose telephone number is (571)270-1821. The examiner can normally be reached on 7:30-5:00 EST Monday-Friday, Alt Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/
Supervisory Patent Examiner, Art Unit 2621
/JMR/

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